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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/996,781	11/30/2001	Sadayoshi Kajino	111251	4584

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EXAMINER
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VAN PELT, BRADLEY J

ART UNIT	PAPER NUMBER
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3682

DATE MAILED: 01/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/996,781	Applicant(s) KAJINO ET AL.	
	Examiner Bradley J Van Pelt	Art Unit 3682	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 December 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \* c) ☐ None of:  
         1. ☒ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
     \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
     a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

The final rejection mailed September 24, 2003 has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Morishita et al.

#### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, and 8-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morishita et al. (USPN 5,847,471).

Morishita et al. disclose a starter for an internal combustion engine including a planetary gear speed reduction mechanism (28), a pinion (27) to be engaged with a ring gear (see column 3, line 38) of said engine and a pinion drive shaft (26) connected to said speed reduction mechanism comprising: a motor (23) having a motor housing (22) with a first outside diameter and a motor shaft (23a); a front housing having a front housing (21) for supporting said pinion drive shaft, said front housing having a bearing (31) for supporting said pinion drive shaft at one end of said shaft and a plurality of fastening holes (32a) disposed at a circumference having second diameter through which a plurality of fastening bolts is fixed to a portion of said internal combustion engine; and a center casing (section between 32 and 22) having approximately the same outside diameter as said motor housing and a bearing (roller bearing contained within housing will support shaft) for supporting said pinion drive shaft at the other end, said center casing being disposed between said motor housing and said front housing for aligning said motor

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shaft, said planetary gear speed reduction mechanism and said pinion drive shaft; adjusting means (33) for fixing said front housing to a selected angular position of said center casing, wherein a difference between said first diameter and said second diameter is larger than a maximum outside diameter of said fastening bolt so that said fastening bolt can be inserted into said fastening hole along outer peripheries of said motor housing (see Fig. 1 bolt will easily pass through 32a meeting this limitation);

said difference is larger than a maximum outside diameter of a socket wrench;

an end frame (24) having a plurality of radially projecting fixing portions (bolt next to 24) disposed away from said fastening holes so as to obstruct said socket wrench;

including a plurality of projecting members (portion projects out near bolt 33) projecting radially outward wherein said adjusting means locates each of said fastening holes away from said projecting members;

said adjusting means provides at least two angular positions that locates all said fastening holes away from said projecting members;

said fastening bolts respectively have bolt heads (inherent), said projecting members project radially outward from an inscribed circle of said bolt heads;

an electromagnetic plunger and fastening means for fixing said center housing and said motor housing together (inherent), wherein said electromagnetic plunger and said fastening means are disposed to project radially outward (fig. 1) from the outer periphery of said motor housing and to be spaced apart from each other in the circumferential direction;

said fastening means comprises a first fastening unit (32) disposed at a first angular position away from said electromagnetic plunger in the other circumferential direction, and wherein,

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said adjusting means locates one of said fastening holes between said electromagnetic plunger and said first fastening unit and another of said fastening holes between said electromagnetic plunger and said second fastening unit;

said adjusting means comprises a certain number of through holes formed at said front housing, more than twice as many female screws as said through holes formed at said center casings and as many screw bolts as said through holes, and wherein said through holes and those of said female screws at selected angular positions are fastened by said screw bolts (see fig. 3).

Morishita et al. does not disclose an integrally formed and radially-outward extending flange.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the flange 32 integral with the front housing 21 and separate the front housing from the center housing of Morishita et al., since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together and constructing a formerly integral structure in various elements involves only routine skill in the art.

Morishita et al. disclose all of the instantly claimed invention, except, said outside first diameter of said motor housing is between 100mm and 118mm, and said planetary gear speed reduction mechanism has a speed reduction ratio between 3.8 and 4.4.

It would have been obvious an obvious matter to modify the outside first diameter of the motor housing between 100mm and 118mm, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the planetary gear speed reduction mechanism with a speed reduction ratio between 3.8 and 4.4, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

3. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morishita et al. in view of Wakatsuki et al. (USPN 4,325,265).

Morishita et al. disclose all of the instantly claimed invention except a dust seal disposed between said front housing and said center housing; dust seal has an inner edge that contacts an outer periphery of said rotary member; said rotary member comprises an overrunning clutch.

Wakatsuki et al. disclose a dust seal (24) disposed between a front housing and a center housing; dust seal has an inner edge that contacts an outer periphery of said rotary member; said rotary member comprises an overrunning clutch (19).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the starter apparatus of Morishita et al. with a dust seal for the purpose of preventing unwanted particles interfering with the functionality of the starter, sequentially reducing maintenance costs.

#### ***Response to Arguments***

4. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.


*Conclusion*

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley J Van Pelt whose telephone number is 703.305.8176. The examiner can normally be reached on M-Th 7:00-4:30, 2nd F 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A Bucci can be reached on 703.308.3668. The fax phone number for the organization where this application or proceeding is assigned is 703.872.9326.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.308.2168.

bjvp

  
DAVID A. BUCCI  
SUPERVISORY PATENT EXAMINER  
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